

Investigations of the Thermostability of the Stereo-regular Polypropylene

SCV/64-59-4-6/27

parations of stereoregular (I) were tested, which were obtained by polymerisation of (I) in the presence of mixed catalysts  $\text{Al}(\text{C}_2\text{H}_5)_3 + \text{TiCl}_3$  or  $\text{Al}(\text{C}_2\text{H}_5)_3 + \text{TiCl}_4$ . The data on the change of the specific viscosity and of the solubility of (I) after heating on air during 1-12 hours at different temperatures of from 130-180° are given (Table 1). The noticed increase of the amount of fraction being soluble in toluene with the temperature is said to be due to the decrease in the (MW) of (I) without a change of the phase state. As is the case also in the oxidation decomposition of rubber two processes take place parallelly - the destruction of the macromolecule and a structuring of the (P) by the reaction of the formed macroradicals. These processes take place especially intensively in compounds containing a tertiary carbon atom with a  $\text{CH}_3$ -group (Ref 5).

The thermal treatment (TT) of (I) increases the total amount of the low-molecular soluble fractions (Table 2) so that up to 90 wt% of (I) can be transformed into these fractions by a repeated heating (3-4 times). The (TT) influences essentially more the (MW) of the crystalline stereoregular (I) than that of the amorphous fractions which may be noticed in the change of the.

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Investigations of the Thermostability of the Stereo-regular Polypropylene

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solubility (Table 3). It was assumed that the thermooxidation-destruction of (I) may be weakened by additions of different antioxidation agents. Experiments with additions of o,o-dioxydiphenyl, dibutyldioxydiphenyl sulphide, tri-tert-butylphenol, dicresyl propane showed that already additions of 0.25% - 0.5% increase essentially the (TS) of (I). There are 2 figures, 3 tables, and 5 references, 3 of which are Soviet.

Card 3/3

GAL'BRAYKH, L.S.; DRUZHININA, T.V.; KRYLOVA, R.A.

Opening of the complete scientific research laboratory  
at the Department of Synthetic Fibers of the Moscow Textile  
Institute. Khim.volok. no.3:78-79 '61. (MIRA 14:6)

1. Moskovskiy tekstil'nyy institut.  
(Textile fibers, Synthetic—Study and teaching)

DRUZHININA, T.V.; KONKIN, A.A.; VINOGRADOV, G.V.

Viscosity of polyethylene melts. Khim.volok. no.1:25-29 '63.  
(MIRA 16:2)

1. Moskovskiy tekstil'nyy institut (for Druzhinina, Konkin).
2. Institut neftekhimicheskogo sinteza AN SSSR (for Vinogradov).  
(Polyethylene)                      (Viscosity)

DRUZHININA, T.V.; ANDRICHENKO, Yu.D.; KONKIN, A.A.; ROGOVIN, Z.A.

Fibers manufactured from ethylene and propylene copolymers.  
Khim. volok. no.3:15-18 '63. (MIRA 16:7)

1. Moskovskiy tekstil'nyy institut.  
(Textile fibers, Synthetic)  
(Ethylene polymers)

DRUZHININA, T.V., nauchnyy sotrudnik; ANDRICHENKO, Yu.D., nauchnyy sotrudnik;  
KONKIN, A.A., prof.; MONASTYRSKIY, A.G.; KUKIN, G.N., prof.

Mechanical properties of fibers made from polyethylene and  
copolymers of ethylene with propylene. Tekst. prom. 25  
no.5:19-24 My '65. (MIRA 18:5)

ACC NR: AP6001866  
 L 11609-65  
 SOURCE CODE: UR/0150/65/007/012/2126/2131  
 AUTHORS: <sup>44,55</sup>Andrichenko, Yu. D.; <sup>44,55</sup>Druzhinina, T. V.; <sup>44,55</sup>Zubov, Yu. A.; <sup>44,55</sup>Konkin, A. A.;  
 Tsvankin, D. Ya. <sup>44,55</sup>  
 ORG: <sup>44,55</sup>Moscow Textile Institute (Moskovskiy tekstil'nyy institut); Institute for  
 Heteroorganic Compounds, AN SSSR (Institut elementoorganicheskikh soyedineniy, AN  
 SSSR) <sup>15,44,55</sup>  
 TITLE: Study of the structure and properties of polyethylene fibers  
 SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 12, 1965, 2126-2131  
 TOPIC TAGS: polymer, crystalline polymer, ~~linear polymer~~, polyethylene, elastic  
 modulus, elasticity, ~~molecular structure~~, solid mechanical property, synthetic fiber,  
 X ray scattering  
 ABSTRACT: The influence of supermolecular structure on the mechanical properties of  
 polyethylene fibers was studied. A particular emphasis was placed on the effect of  
 stretching on the structural transformation of linear polyethylene fibers. The  
 experiments were carried out at 110C. The structural changes were investigated by  
 means of x-ray spectroscopy, birefringence, and density determinations. The  
 interpretation of large angle x-ray scattering data was carried out by the method  
 of D. Ya. Tsvankin (Vysokomolek. soyed., 6, 2078, 2083, 1964). Mechanical properties  
 of the fibers determined as a function of the degree of stretching are presented in  
 UDC: 678.01:53+678.742  
 Card 1/2

L 11609-66

ACC NR: AP6001866

tables and graphs. It was found that complete orientation of crystallites was realized at 800% stretching. The so-called large period first decreases from 200 Å to 173 Å, and then increases to 212 Å with increase in the degree of stretching. At higher degrees of stretching, the intensity of the large period decreases sharply. It is suggested that the marked increase in the elasticity modulus which increases in the large period is associated with the orientation of crystallites and with the increased degree of crystallinity of the polymer fibers. Orig. art. has: 2 tables and 4 graphs.

SUB CODE: 11/ SUBM DATE: 26Jan65/ ORIG REF: 003/ OTH REF: 001

Card 2/2



TUGARINOVA, V.N.; ALEKSEYEVA, N.P.; DRUZHININA, V.A.

Possibility of employing a photoelectric erythrohemometer for determining the erythrocyte count in laboratory animals during toxicological examinations. Gig.i san. 25 no.8:52-55 Ag '60. (MIRA 13:11)

1. Iz Moskovskogo nauchno-issledovatel'skogo instituta sanitarii i gigiyeny imeni F.F.Erismana Ministerstva zdravookhraneniya RSFSR. (ERYTHROCYTES) (TOXICOLOGY)

USSR / Forest Science. Biology and Typology of Trees.

K-2

Abs Jour : Ref. Zhur - Biologiya, No 17, 1958, No. 77488

Author : Konstantinova, V. K.; Druzhinina, V. I.; Pospelova, L. V.

Inst : Povolzh' Forest Technical Institute

Title : Growth of Spruce Under Deciduous Cover Stands

Orig Pub : Sb. stud. rabot Povolzhsk. lesotokhn. in-t, 1957, vyp. 4,  
36-38

Abstract : No abstract given

Card 1/1

DRUZHININA, V.S.

Effect of diiodated contrast media on the cardiovascular system.  
Farm. 1 toks. 28 no.5:539-542 S-0 '65.

(MIRA 18:12)

1. Klinika gospi'tal'noy khir'urgii (zav. - prof. P.P.Kovalenko)  
i kafedra patologicheskoy fiziologii (zav. - prof. A.N.  
Gordiyenko) Rostovskogo-na-Donu meditsinskogo instituta.  
Submitted July 4, 1964.

DRUZHININA, Ye.I.

Case of Hymenolepis nana infection. Med. paras. i paras. bol. no. 2:  
177 Ap-Je '54. (MLBA 7:8)

1. Iz kafedry pediatrii Molotovskogo meditsinskogo instituta (sav.  
kafedroy prof. P.I. Pichugin)

(TAPEWORMS,

\*Hymenolepis nana, infect., case reports)

DRUZHININA, E.I.

Treatment of children suffering from angiocholecystitis.  
Sov. med. 27 no.12:108-112 D'63 (MIRA 17:4)

1. Iz detakoy klinicheskoy bol'nitsy No.9 (glavnyy vrach  
M.N.Lomayeva, nauchnyy rukovoditel' - prof. D.D. Lebedev)  
Permi.

USSR / Microbiology. General Microbiology. Physiol- F-1  
ogy and Biochemistry.

Abs Jour: Ref Zhur-Biol., No 16, 1958, 71952.

Author : Chaykovskaya, S. M., Druzhinina, Ye. N.

Inst : Not given.

Title : Simplified Cup Method for Determining Vitamin  
B<sub>12</sub> Concentration.

Orig Pub: Mikrobiologiya, 1957, 28, No 5, 609-613.

Abstract: No abstract.

*All-Union Sci Res Inst Antibiotics*

Card 1/1

12

KHOKHLOV, A.S.; KLEYNER, Ye.M.; DRUZHININA, Ye.N.

Chemical properties of phenoxymethylpenicillin; acid inactivation  
of phenoxymethylpenicillin and of its amines in nonaqueous solutions  
[with summary in English]. Antibiotiki 3 no.6:42-45 N-D '58.  
(MIRA 12:2)

(PENICILLIN, rel. cpds.

phenoxymethylpenicillin, acid inactivation in non-  
aqueous solutions (Rus))

DRUZHININA, Ye.N.

Determination of small quantities of antibiotics of the tetracycline series in medicinal preparations, serum, milk, and other biological fluids using the agar diffusion method. Antibiotiki 4 no.3:109-112 My-Je '59. (MIRA 12:9)

1. Otdel mikrobiologicheskikh metodov kontrolya (zav. A.Ye. Tsyukina) Vsesoyuznogo nauchno-issledovatel'skogo instituta antibiotikov.

(TETRACYCLINE, determ.  
in pharmacol. prep. & biol. fluids, agar  
diffusion method (Rus))



DRUZHININA, Ye.N.

Determining of the biological activity of phenoxymethylpenicillin  
and studying the stability of its therapeutic forms. Med. prom. 13  
no.2:45-48 F '59. (MIRA 12:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.  
(PENICILLIN)

DRUZHININA, Ye.N.

Determination of the biological activity of antibiotics of  
the tetracycline series. Med.prom. 13 no.3:29-32 Mr '59.  
(MIRA 12:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.  
(TETRACYCLINE)

DRUZHININA, Ya.N.; SEMENOV, S.M.

Determination of the biological activity of bicillin-1 and  
bicillin-3. Med. prom. 13 no.8:56-59 Ag '59. (MIRA 13:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.  
(PENICILLIN)

DRUZHININA, Ye.N.

Microbiological method for the separate determination of tetracycline and chlortetracycline in corresponding preparations. Antibiotiki 6 no.2:167-172 F '61. (MIRA 14:5)

1. Laboratoriya mikrobiologicheskikh metodov kontrolya (zav. A.Ye. Tebyakina) Vsesoyuznogo nauchno-issledovatel'skogo instituta antibiotikov:

(AUREOMYCIN)

(TETRACYCLINE)

TEBYAKINA, A.Ye.; DRUZHININA, Ye.N.

Stability of antibiotics of the tetracycline series, their various  
salts and medicinal forms. Antibiotiki 6 no.2:178-185 F '61.  
(MIRA 14:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.  
(TETRACYCLINE)

TEBYAKINA, A.Ye.; DRUZHININA, Ye.N.

Determining the biological activity of levomycetin (chloramphenicol)  
by the agar diffusion method. Antibiotiki 7 no.1:83-85 Ja '62.  
(MIRA 15:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.  
(LEVOMYCETIN) (AGAR)

TEBYAKINA, A.Ye.; INOZEMTSEVA, I.I.; EL'KINA, E.I.; SEMICH, A.I.;  
BUYANOVSKAYA, I.S.; DRUZHININA, Ye.N.

Tetracycline salts of phenoxymethylpenicillin. Antibiotiki 7 no.2:  
109-112 F '62. (MIRA 15:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.  
(PENICILLIN) (TETRACYCLINE)

KORCHAGIN, V.B.; KOROBITSKAYA, A.A.; DRUZHININA, Y.G.; SEMENOV, S.M.

Quantitative method for determining neomycin in a fluid culture medium.  
Antibiotiki 7 no.2:124-128 F '62. (MIRA 15:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.  
(NEOMYCIN)



SAVITSKAYA, Ye.M.; SHELLBERG, N.N.; LIBINSON, G.S.; BRUNS, B.P.; KOLYGINA,  
T.S.; DRUZHININA, Ye.N.

Method for isolating crystalline 6-aminopenicillanic acid from  
culture fluids obtained during the fermentation of the micro-  
organism, *Penicillium chrysogenum*, without a precursor. Antibiotiki  
7 no.5:434-437 My '62. (MIRA 15:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.  
(PENICILLANIC ACID) (PENICILLIUM)

BRUNS, B.P.; SAVITSKAYA, Ye.M.; SHELLENBERG, N.N.; LIBINSON, G.S.;  
KOLYGINA, T.S.; DRUZHINIHA, Ye.N.

Physicochemical properties of 6-aminopenicillanic acid — titration  
curves and its solubility. Antibiotiki 7 no.5:440-442 My '62.  
(MIRA 15:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.  
(PENICILLANIC ACID)

KONDRAT'YEVA, A.P.; DRUZHININA, Ye.N.; BRUMS, B.P.; NIKOLAYEVA, T.A.

Stability of 6-aminopenicillanic acid in aqueous solutions. Antibiotiki  
7 no.5:442-448 My '62. (MIRA 15:4)  
(PENICILLANIC ACID)

KORCHAGIN, V.B.; YERMAKOVA, N.M.; DRUZHININA, Ye.N.

Iodometric method of determining 6-aminopenicillanic acid. Antibiotiki  
7 no.5:449-453 My '62. (MIRA 15:4)  
(IODOMETRY) (PENICILLANIC ACID)

DRUZHININA, Ye.N.; SUVORKINA, D.V.

Agar diffusion method for the determination of small concentrations of streptomycin and dihydrostreptomycin. Antibiotiki  
7 no.9:825-828 S '62. (MIRA 15:12)

1. Laboratoriya mikrobiologicheskikh metodov kontrolya (zav.--  
A.Ye.Tebyakina) Vsesoyuznogo nauchno-issledovatel'skogo instituta  
antibiotikov.

(STREPTOMYCIN)(ANTIGENS AND ANTIBODIES--ANALYSIS)

STRUKOV, I.T.; TEBYAKINA, A.Ye.; INOZETSEVA, I.I.; KOSTROMINA, O.Ye.; KAMOKINA, Z.F.; BUYANOVSKAYA, I.S.; SHNEYERSON, A.N.; CHAYKOVSKAYA, S.M.; DRUZHININA, Ye.N.

2,6-dimethoxyphenyl penicillin (methycillin) and its microbiological study. Antibiotiki 8 no.8:690-694 Ag '63. (MIRA 17:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.

PANINA, M.A.; STRUKOV, I.T.; TEBYAKINA, A.Ye.; BUYANOVSKAYA, I.S.;  
SHNEYERSON, A.N.; CHAYKOVSKAYA, S.M.; DRUZHININA, Ye.N.;  
BRAGINSKAYA, P.S.; VENKINA, T.G.

5-methyl-3-phenyl-4-isoxazole pencillin (oxacillin) and its  
microbiological study. Antibiotiki 8 no. 11:989-994 N '63.  
(MIRA 17:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.

TEBYAKINA, A.Ye.; DRUGHININA, Ye.N.; SUVORKINA, D.V.

Determination of the biological activity of tetracycline and  
oleandomycin in the preparations of sigmarycin. Antibiotiki  
8 no. 11:1052-1055 N '63. (MIR 17:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.



TEBYAKINA, A.Ye.; RABINOVICH, M.S.; ZHDANOVICH, Yu.V.; STRUKOV, I.T.;  
KONDRAT'YEVA, A.P.; BUYANOVSKAYA, I.S.; SHNEFERSON, A.N.;  
GRAGINSKAYA, P.S.; DRUZHININA, Ye.N.

Alpha-aminobenzylpenicillin (ampicillin) and its microbiological  
studies. Antibiotiki 9 no.5:38,-392 My '64. (MIRA 18:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov,  
Moskva.

DRUZHININA, Ye.N., kand. tekhn. nauk, dotsent; DAVYDOVA, V.V., inzh.

New technology of heat treatment of die-casting mold parts with the use of gas cyaniding process. Izv.vys.ucheb.zav.; mashinostr. no.5:155-161 '64. (MIRA 18:1)

1. Moskovskoye vyssheye tekhnicheskoye uchilishche imeni N.E.Baumana.

Chemical Abst.  
Vol. 48 No. 9  
May 10, 1954  
Metallurgy and Metallography

③ Mel  
Method for deep case hardening with low-temperature  
cyaniding gases. *V. N. Druzhinina. Vsesoyuz. Maishino-*  
*stroeniye* 13, No. 9, 10-3 (1953).—A 1.5-2 times deeper case  
on hardened high-speed steel tools cyanided at 600-650°  
for 1-3 hours in a mixt. of 80-70% of dild. natural gas and  
20-30% NH<sub>3</sub> than in conventional practice can be produced  
by previously electrolytically degreasing the tools according  
to the Kostetskii and Kuruklis method (C.A. 41, 261a).  
J. D. Gai

USSR/Engineering -- Heat treating

Card 1/1    Pub. 128 - 16/32

Authors     :    Druzhinina, E. N.

Title       :    The increase in size of the grain of austenite steel, type 45 during its heating with high-frequency currents

Periodical   :    Vest. mash. 11, 59-60, Nov 1954

Abstract    :    An experiment was conducted to determine the influence of high-frequency heating of the type 45 steel, on its structure and hardness in dependency of temperature and rate of heating in the field of phase conversions. Two USSR references (1950 and 1951). Graphs.

Institution   :    ...

Submitted    :    ...

DRUZHININA, Ye.N., kandidat tekhnicheskikh nauk.

Investigating the process of low-temperature gas cyaniding.  
[Trudy] MVTU no.41:94-108 '55. (MLRA 9:10)

(Cyanide process) (Steel--Metallography)

DRUZHININA, Ye.N., kandidat tekhnicheskikh nauk.

Growth of austenite grains in the "45" steel subjected to  
annealing by high-frequency current. [Trudy] MVTU no.41:  
109-116 '55. (MLRA 9:10)

(Austenite) (Steel--Heat treatment)

DRUZHININA, Ye.N., kand.tekhn.nauk, dots.

Gas cyaniding of structural steels at low temperature. [Trudy]  
MTU no.91:142-149 '59. (MIRA 12:7)  
(Steel, Structural--Metallography)  
(Case hardening)

82668

S/080/60/033/007/012/020  
A003/A001

18.8300; 18.7100

AUTHORS: Kochergin, V. P., Druzhinina, Ye. P., Men'shenina, G. V.,  
Asanova, E. P.

TITLE: The Corrosion of Iron in Molten Nitrates and Chlorides of Metals  
of Groups I and II in D. I. Mendeleev's System

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol. 33, No. 7, pp. 1580-1586

TEXT: <sup>1</sup> The corrosion rate of iron was studied in the following melts:  
<sup>1</sup>  $\text{NaNO}_3 - \text{MgCl}_2$ ,  $\text{NaNO}_3 - \text{ZnCl}_2$ ,  $\text{NaNO}_3 - \text{LiCl}$ ,  $\text{NaNO}_3 - \text{KCl}$ ,  $\text{Ca}(\text{NO}_3)_2$  <sup>1</sup>  $\text{NaCl}$ ,  
<sup>1</sup>  $\text{Sr}(\text{NO}_3)_2 - \text{NaCl}$ ,  $\text{Ba}(\text{NO}_3)_2 - \text{NaCl}$ ,  $\text{KNO}_3 - \text{NaCl}$ . The degree of thermal decompo-  
sition of these nitrates in the presence of chlorides of various metals was  
also investigated. The results are important for selecting salt melts for  
fluxes, heat carriers and thermal treatment of metal articles. The experiments  
were carried out at a temperature of 500°C. The highest corrosion rate of iron  
was observed in the melt  $\text{Ca}(\text{NO}_3)_2 - \text{NaCl}$ . The oxidation decreases in the  
series of the following melts:  $\text{Sr}(\text{NO}_3)_2 - \text{NaCl}$ ,  $\text{Ba}(\text{NO}_3)_2 - \text{NaCl}$ ,  $\text{KNO}_3 - \text{NaCl}$ .  
The corrosion is accompanied by the reactions  $2\text{Fe} + \text{O}_2 \rightarrow 2\text{FeO}$ ;  $6\text{FeO} + \text{O}_2 \rightarrow 2\text{Fe}_3\text{O}_4$ .

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S/080/60/033/007/012/020  
A003/A001

The Corrosion of Iron in Molten Nitrates and Chlorides of Metals of Groups I and II in D. I. Mendeleev's System

Molecular oxygen appears in the melts due to thermal decomposition of nitrates to nitrites. The degree of nitrate decomposition depends on the counter-polarizing capacity of the cations. In the cation series  $\text{Ca}^{+2}$ - $\text{Sr}^{+2}$ - $\text{Ba}^{+2}$ - $\text{K}^{+1}$  the counter-polarizing capacity decreases due to an increase in the radius and a decrease of the charge, the thermal stability of alkali earth metal nitrates increases, and the amount of molecular oxygen liberated decreases. The hydrolysis and thermal dissociation of the nitrates to metal oxides increases in proportion to an increase in the temperature and in the counter-polarizing capacity of the cations in the series:  $\text{Ba}(\text{NO}_3)_2$ - $\text{NaCl}$ ,  $\text{Sr}(\text{NO}_3)_2$ - $\text{NaCl}$ ,  $\text{Ca}(\text{NO}_3)_2$ - $\text{NaCl}$ . The corrosion rate increases if sodium nitrate is added to molten chlorides of magnesium, zinc, lithium and potassium.. Beyond a certain maximum of the nitrate content the corrosion rate decreases again. It is evident that the chlorine ions are depassivators in the oxidation of iron in molten nitrates. They destroy the oxide film on the iron and facilitate the diffusion of the oxidizing agent to the surface of the metal. The dehydration of the melts in a deep vacuum at  $500^\circ\text{C}$  for 2.5-3 hours leads to a considerable decrease of the corrosion rate in the melts:  $\text{NaNO}_3$ - $\text{MgCl}_2$ ,  $\text{NaNO}_3$ - $\text{ZnCl}_2$ ,  $\text{NaNO}_3$ - $\text{LiCl}$ ,  $\text{Sr}(\text{NO}_3)_2$ - $\text{NaCl}$ .

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82668

S/080/60/033/007/012/020  
A003/A001

The Corrosion of Iron in Molten Nitrates and Chlorides of Metals of Groups I and II in D. I. Mendeleev's System

The decrease is caused by the elimination of gaseous hydrolysis products and traces of water. The conclusion is drawn that in the thermal treatment of metal articles, it is necessary to avoid the introduction of chlorides of various metals into saltpeter baths and the introduction of nitrates and nitrites of alkali and alkali earth metals into chloride baths. There are 4 graphs, and 17 references: 15 Soviet and 2 English. UX

ASSOCIATION: Ural'skiy gosudarstvennyy universitet imeni A. M. Gor'kogo  
(Ural State University imeni A. M. Gor'kiy)

SUBMITTED: December 14, 1959

Card 3/3

YATSENKO, S.P.; DRUZHININA, Ye.P.

Density and viscosity of sodium-gallate solutions. TSvet. met.  
36 no.7:61-63 J1 '63. (MIRA 16:8)  
(Solutions (Chemistry)—Testing) (Gallate)

DRUZHINSKIY, Isaak Abramovich, kapt, tekhn. nauk, laureat Stalinskoy premii; LEVIN, S.M., inzh., retsenzent; CHFAS, M.A., red. izd-va; SHCHETININA, L.V., tekhn. red.

[Methods for machining shaped surfaces on machine tools] Metody obrabotki slizhnykh poverkhnostei na metalloreshushchikh stankakh. Izd.2., perer. i dop. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroitel. lit-ry, 1961. 485 p. (MIRA 14:8)  
(Metal cutting)

YATSENKO, S.P.; DRUZHININA, Ye.P.

Reciprocal dissolubility of mercury and gallium. Zhur.neorg.khim.  
6 no.8:1902-1904 Ag '61. (MIRA 14:8)  
(Solubility) (Mercury) (Gallium)

DRUZHININA, Z.I.; ZAVADOVSKAYA, Ye.K.; STEBNITSKAYA, G.V.

Ionic electric conductivity of single crystals in solid solutions  
and mechanical mixtures of alkali metal halides. Izv. TPJ 95:  
217-225 '58. (MIRA 14:9)

(Solutions, Solid--Electric porperties)  
(Alkali metal halides--Electric properties)

DRUZHINSKIY, I.A., kand. tekhn. nauk, Laureat Gosudarstvennoy  
premi

[Methods for the machining of intricate surfaces with  
metal-cutting tools] Metody obrabotki slozhnykh po-  
verkhnostei na metallereshushekh stankakh. Izd.3.,  
perer. i dep. Moskva, Mashinostroyeniye, 1965. 598 p.  
(MIRA 18:7)

SAVENKOV, N.G.; KULIKOV, S.V.; DRUZHININSKIY, M.V., redaktor; KALACHEV,  
S.G., tekhnicheskiiy redaktor

[Oxygen equipment in airplanes] Kislородное oborudovanie samoletov.  
Moskva, 1953. 214 p. (MLRA 7:9)  
(Aeroplanes--Oxygen equipment)



~~DRUZHININSKIY, M.V.~~

STOBROVSKIY, N.O., LOGINOV, N.F., kandidat tekhnicheskikh nauk, redaktor.

DRUZHININSKIY, M.V., redaktor; inzhener-mayor; SRIBNIS, N.V.,

~~tekhnicheskii redaktor.~~

[Our country is the birthplace of aeronautics] Nasha strana-rodina  
vozdukhoplavaniia. Pod red. N.F. Loginova. Moskva, Voen.isd-vo

Ministerstva oborony Soiusa SSR, 1954. 101 p. (MLRA 8:9)

(Aeronautics--History)

RYBAL'CHIK, Valentin Stepanovich; POLYAKOV, Sergey Vasil'yevich; GERASIMENKO, Vasil'y Fedorovich; DOBRYNIN, A.A., dotsent, kandidat tekhnicheskikh nauk, inzhener-polkovnik, redaktor; DRUZHININSKIY, M.V., inzhener, mayor, redaktor. SOKOLOVA, G.F., tekhnicheskiiy redaktor.

[A theory of piston airplane motors] Teoriia poramevnykh aviatsionnykh dvigatelay. Pod red. A.A.Dobrynina. Moskva, Voen.izd-vo Ministerstva obor. SSSR, 1955. 351 p. (MLRA 9:5)  
(Airplanes--Motors)

*DRUZHININSKIY, M.V.*

SENICHKIN, Grigoriy Vasil'yevich; DRUZHININSKIY, M.V., redaktor; KUZ'MIN,  
I.F., tekhnicheskiy redaktor

[Design and operation of the M-11FR motor] Konstruktsiya i ekspluata-  
tsiya dvigatelya M-11FR. Moskva, Voen. izd-vo Ministerstva obor.SSSR,  
1956. 254 p. (MIRA 10:1)

(Airplanes--Motors)

*DRUZHININSKIY M.V.*

PHASE I BOOK EXPLOITATION

177

Platonov, Konstantin Konstantinovich, Doctor of Medical Sciences,  
Professor, Colonel of Medical Services

Chelovek v polete (Man in Flight) 2d ed., rev. and enl. Moscow,  
Voyen. izd-vo Min-va obor. SSSR, 1957. 284 p. Number of copies  
printed not given.

Ed.: Druzhininskiy, M. V., Engineer-Major; Tech. Ed.:  
Konovalova, Ye. K.

PURPOSE: The book is intended for members of flying clubs, students  
of flying schools, and the flying staff of the Air Force, combat  
units of the Soviet Army as well as young people interested in  
aviation. It will also be useful for physicians giving service to  
flying sections, schools, and clubs.

Card 1/5

Man in Flight

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COVERAGE: The basic problems of aviation medicine are discussed, a knowledge of which is necessary for all fliers. This book was started in 1937 and first published in 1946. In view of the rapid progress of aviation and aviation medicine, it required a thorough revision in 1957 in which the author was assisted by the Collective of the Scientific Research and Test Institute for Aviation Medicine.

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IMS/bmd  
30 July 58

Card 5/5



REBEROV, Mikhail Fedorovich, inzh.-kapitan; BODNER, V.A., prof., doktor  
tekhn.nauk, general-mayor inzh.-tekhn.sluzhby, red.;  
DRUZHININSKIY, M.V., red.; SOKOLOVA, G.F., tekhn.red.

[The role of automatic devices on an airplane] Chto delaet  
avtomaty na samolete? Pod red. V.A.Bodnera. Moskva, Voen.izd-vo  
M-va obor.SSSR, 1960. 177 p. (MIRA 14:2)  
(Airplanes--Controls)

REZNIKOV, Mark Yevseyevich, dotsent, kand.tekhn.nauk; STOLYAROV, V.G.,  
retsensent; DRUZHININSKIY, M.V., red.; MYASHNIKOVA, T.F.,  
tekhn.red.

[Aircraft and rocket fuels and lubricants] Aviatsionnye i  
raketnye topliva i smazochnye materialy. Moskva, Voen.isd-vo  
M-va obor.SSSR, 1960. 206 p. (MIRA 13:11)  
(Airplanes) (Rockets (Aeronautics)--Fuel)

FEODOROV, Vladimir Ivanovich, dotsent, kand.tekhn.nauk, inzh.-polkovnik;  
DRUZHININSKIY, M.V., red.; MYASNIKOVA, T.F., tekhn.red.

[Construction of jet planes] Konstruktsiia reaktivnykh samoletov.  
Moskva, Voen.isd-vo M-va obor.SSSR, 1960. 265 p.

(MIRA 13:4)

(Jet planes)

FILIPPOV, Vasil'y Vasil'yevich, inzh.-polkovnik; SHEVEL'KO, P.S., inzh.-polkovnik, retsenzent; DRUZHINSKIY, M.V., inzh.-podpolkovnik, red.; SRIBNIS, N.V., tekhn.-red.

[Fighting negative thrust occurring in turbo-prop engines; characteristics of the operation of an airplane with a turbo-propengine]  
Kak letchiku borot'sia s otritsatel'noi tiagoi TVD; ob osobennostyakh raboty i ekspluatatsii na samolete turbovintovogo dvigatelya. Moskva, Voen. izd-vo M-va obor. SSSR, 1961. 57 p.

(MIRA 14:9)

(Airplanes—Turbine-propeller engines)

BELYAKOV, Vladimir Trofimovich; PANOV, Nikolay Nikolayevich; FILIPPOV, Vasil'y Vasil'yevich; DRUZHINSKIY, M.Y., inzh.-podpolkovnik, red.; KRASAVINA, A.M., tekhn. red.

[Maintenance of helicopters] Tekhnicheskaya ekspluatatsiya ver-toletov. Moskva, Voen. izd-vo M-va oborony SSSR, 1961. 311 p.  
(Helicopters--Maintenance and repair) (MIRA 15:2)

SOLOMONOV, Petr Andreyevich, starshiy nauchnyy sotr., kand. tekhn. nauk,  
inzh.-podpolkovnik; GERASIMOV, R.A., inzh.-polkovnik; DEUZHININSKIY,  
M.V., inzh.-podpolkovnik, red.; BUKOVSKAYA, N.A., tekhn. red.

[Service life of modern airplanes] O tekhnicheskoy resurse sovremennykh samoletov. Moskva, Voenizdat, 1962. 66 p.

(MIRA 16:1)

(Airplanes)

NIKONOV, Arseniy Dmitriyevich, kand. tekhn. nauk; DRUZHINSKIY,  
M.V., red.

[Supersonic "boom" of an airplane] Sverkhzvukovoi "khlopok"  
samoleta. Moskva, Voenizdat, 1964. 51 p. (MIRA 17:7)

PONOMAREV, Aleksandr Nikolayevich; DRUZHININ, M.V., red.;  
SINYAKOV, S.P., general-leutenant aviatsii, retsenzent;  
MYASNIKOVA, T.F., tekhn. red.

[Rocket aircraft] Raketonosnaia aviatsiia. Moskva, Voen-  
izdat, 1964. 341 p. (MIRA 17:2)



DRUZHININ, I. A.

36153 Pervyye russkiye kopiroval'no-tokarnyye stanki. V sb: Spetsializir. stanki v mashinostroyenii. M-L., 1949, S. 14-2 4.

SO: Letopis' Zhrunal'nykh Statey, No. 49, 1949

DRUGHINSKI, I. A.

36152 Osnovnyye polozheniya proyektirovaniya spetsial'nykh Kopiroval'nykh stankov.  
V sb: Spetsializir. Stanki v mashinostroenii. M.-L., 1949, S. 97-120.

SO: Letopis' Zhrumal'nykh Statey, No. 49, 1949

DRUZHINSKIY, I. A.

Metody frezorovaniia prostranstvenno-slozhnykh poverkhnostei. Moskva-Leningrad, Mashgiz, 1950. 126 p.

Methods of milling spatially complicated surfaces.

DLC: Unclass.

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953

DRUZHINSKIY, I. A.

Elektro-kopiroval'no frezernyy poluavtomat model 64/1A (Electrical  
duplicate milling machine, semiautomatic model 64/1A, 1y) T. N.  
Sokolov, I. A. Druzhinskiy (i dr.) Sistemy t. n. Sokolov.  
Moskva, Mashgiz, 1951.

135 p. illus., diagrs., tables. "Literatura" p. 124.

SO: N/5  
662.33  
.S6

DRUZHINSKIY, I.A., laureat Stalinskoy premii.

Form milling devices for universal machines. [Isd] LONITO-  
MASH 24:73-91 '51. (MIRA 8:2)  
(Milling machines)

DRUZHINSKIY, I. A.

Duplicating lathe of A. K. Nattov. Les. prom., No 5, 1952.

DRUZHINSKIY, I.A.

Analysing the possibility of profiling with mechanical control. Stan. 1  
instr. no.6:5-9 Je '53. (MLRA 6:7)  
(Milling machines)

"APPROVED FOR RELEASE: 08/22/2000

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DRUZHINSKIY, I.A.

New technological possibilities in the use of the 6441 A semiautomatic  
profiling die-duplicating machine. Stan.1 instr. vol. 24 no.9:7-10 S '53.  
(MIRA 6:10)  
(Machine tools)

SOKOLOV, T.H., laureat Stalinskoi premii; DRUZHINSKIY, I.A., laureat Stalinskoi premii; VOROSHILOV, M.S., kandidat tekhnicheskikh nauk, redaktor; PRESS, S.A., doktor tekhnicheskikh nauk, retsentsent.

[Automatic control of profiling processes on metal-cutting machines: elements of profiling machines] Avtomaticheskoe upravlenie protsessami kopirovaniia na metalloreshushchikh stankakh; elementy kopiroval'nykh stankov. Leningrad, Gos. nauchno-tekhn. izd-vo mashinostroit. i sudostroit. lit-ry [Leningradskoe otd-nie] 1954. 328 p. (MLRA 7:6)  
(Cutting machines)

PHASE X

TREASURE ISLAND BIBLIOGRAPHICAL REPORT

AID 764 - X

BOOK

Call No.: AF666972

Author: DRUZHINSKIY, I. A. (Stalin Prize Winner)

Full Title: MACHINING COMPLEX SURFACES

Transliterated Title: Metody obrabotki slozhnykh poverkhnostey na metalloreshu-  
shchikh stankakh

PUBLISHING DATA

Originating Agency: None

Publishing House: State Scientific and Technical Publishing House of Machine-  
Building Literature (Mashgis), Leningrad

Date: 1955

No. of pp.: 316

No. of copies: 6,000

Editorial Staff

Editor: Lomachenkov, S. E., Eng.

Appraiser: Chernyshev, P. S., Eng.

PURPOSE AND EVALUATION: This book is written specifically for designers, engineers and machinists. It may be used as a text-book by senior students of machinery and machine-tool design. As the first attempt to generalize theoretical information and practical knowledge on processing complex surfaces by metal-cutting machines, this book and the author should be given full credit for a concise presentation of the subject.

TEXT DATA

Coverage: This book deals with problems and methods of processing pieces of intricate design and complicated surfaces on metal-cutting machines. A major

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Metody obrabotki slozhnykh poverkhnostey na metallorezhushchikh  
stankakh

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part of the book consists of the analysis and kinematic formation of complex-surfaced parts. Designs of special equipment for the purpose, numerous profile-measuring devices and copying machines with various profile-measuring devices are discussed. The book analyses quality control and inspection. The author provides additional information on the application of mechanically-operated copying devices and makes appropriate recommendations for proper selection of the methods for processing intricate pieces by such machinery. In addition to various machining methods by the profiling machines with controlling and directing devices the author presents the feasibility of machining some pieces with complicated surfaces by regular transmission lathes or by a special master-form attachment. There are numerous sketches, drawings and mathematical formulae, a few pictures and some GOST standards spread throughout the book.

Table of Contents

Chapter I. Information on parts with complicated surfaces, and methods of their machining. Stamping and moulding parts; water and air propellers, hydraulic turbine blades and vanes; cams and conoids; variable-pitch screws, and other parts.

Pages

5-53

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Metody obrabotki slozhnykh poverkhnostey na metallovezhushchikh  
stankakh

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Pages

Chapter II. Complicated Surfaces. Definition and absence of strict classification; kinematics of formation of intricate surfaces; basic algebraic surfaces: conusoids, cylindroids and conoids; paraboloids, ellipsoids, hyperboloids and helical surfaces; arbitrary surfaces; analytical determination of penetrability of cutting tools while machining such surfaces.

54-76

Chapter III. Fundamentals in processing work by copying machines. Principles and systems, the systems of direct and indirect action; copying machines with mechanical, semi-automatic and manual control; profile-measuring devices; copying machines with electric controls (feed-back system), contact profile-measuring devices (profile-measuring device designed by Yeliseyev B. M.); copying machines with induction-resistance device (most widely used in copying machines); model 644I-A semi-automatic copying apparatus; copying machines with hydraulic controls; electric, magnetic and mechanical vibrators; copying machines with pneumatic controls.

77-126

Chapter IV. Formation of Surfaces with Master-forms. Three basic types and four different methods of surface-formation

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Metody obrabotki slozhnykh poverkhnostey na metallorazhushchikh  
stankakh

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|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
|              | with the help of one, two and three master-forms.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Pages<br>127-156 |
| Chapter V.   | <u>Analysis of Copying with Mechanical Controls.</u> Mathe-<br>matical background and exposition of shortcomings in<br>this method of processing profiles with large angle<br>of inclination; deformation of master-form as the<br>weakest spot in this type of machining.                                                                                                                                                                                                                                                                                                           | 157-179          |
| Chapter VI.  | <u>Formation of Surfaces with Adjustable kinematic<br/>drives.</u> Two basic methods; setting-up and adjusting<br>specific machine-tools; machining gears by shaping<br>and hobbing.                                                                                                                                                                                                                                                                                                                                                                                                 | 180-207          |
| Chapter VII. | <u>Formation of Surfaces with Special master-forms.</u><br>Special master-form acting through tracing devices,<br>used in work on cylindrical, elliptic and other curved<br>part pieces; special master-forms connected <u>directly</u><br>with the cutting tool; conicographs; machining convex<br>and concave pieces, paraboloids and other such curved<br>surfaces; potentiometers: with irregularly-shaped forms,<br>with electric profiling mechanisms, design of F. V.<br>Mayorov, Dr. of Tech. Sci.,; E. A. Maykapar and N. I.<br>Tseytlin are further developing this field. | 208-234          |

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Metody obrabotki slozhnykh poverkhnostey na metallorezhushchikh  
stankakh

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Pages

Chapter VIII. Formation of Surfaces by Combination of Tracers,  
Special master-forms and Adjusted kinematic drives.  
Combination of tracers with adjusted kinematic drives;  
combination of tracers with pantographs; combination of  
special master-forms and tracers with adjusted kinematic  
drives. 235-267

Chapter IX. Considerations in Design of Special Equipment for  
Machining Complicated Surfaces. Problems and suggestions.  
Microgeometry's dependence on the form of the surface  
and the position of cutting tool; selection of processing  
method appropriate to surfaces to be machined; the model  
1620 lathe and model 6441-A profile milling semi-  
automat; copying machines of special designation,  
profiling aggregates, profiling attachments for univer-  
sal machines; special machines for simultaneous  
processing of several pieces (up to 14 blanks); selection  
of tracing system. Controlling implements in processing  
of complicated surfaces; various types of master-forms  
for copying the most intricate surfaces, their con-  
struction and special features. 268-313

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Metody obrabotki slozhnykh poverkhnostey na metalloreshushchikh  
stankakh

AD 764 - I

No. of References: 12 Russian, 1934-1953.

Facilities: All-Union Institute for Technological Design (Vsesoyuznyy Proyektno-  
tekhnologicheskii Institut); and Committee on the Technology of Machine-Building  
at the Institute for Mechanical Studies of the Academy of Sciences of the USSR  
(Komitet tekhnologii mashinostroyeniya Instituta mashinovedeniya Akademii nauk  
SSSR).

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TRUZHINSKIY, I. A.

Truzhinskiv, I. A. -- "Analysis of Systems of Copring the Action of Metal-Cutting Tools." Min Higher Education USSR. Leningrad Polytechnic Inst imeni M. I. Kalinin. Leningrad, 1956. (Dissertation for the Degree of Candidate in Technical Science)

So: Knizhnaya Letopis', No 12, 1956

DRUZHINSKIY, I.A.; FEDOSYINA, Ye.P.; RZHONSNITSKIY, B.N., kandidat tekhnicheskikh nauk, redaktor.

[A.K.Nartov's "Theater of machines"; for the 200th anniversary of the death of A.K.Nartov, author of the first Russian work on machines] "Teatrum makhinarum" A.K.Nartova; k 200-letiu so dnia smerti A.K.Nartova - avtora pervogo russkogo truda o stankakh. Leningrad, Gos.publichnaia biblioteka im. M.E.Saltykova-Shchedrina, 1956. 89 p. (MLRA 9:6)

(Nartov, Andrei Konstantinovich, 1693-1756)

KUCHER, Iosif Mikhaylovich, kandidat tekhnicheskikh nauk, dotsent; SHAVLYUGA, Nikolay Ignat'yevich, kandidat tekhnicheskikh nauk, dotsent; BARSKIY, M.M., inzhener, redaktor; DRUZHINSKIY, I.A., kandidat tekhnicheskikh nauk, redaktor; SIMONOVSKIY, N.Z., redaktor izdatel'stva; SOKOLOVA, L.V., tekhnicheskij redaktor

[Automatization of machine tools; a survey of foreign technology]  
Avtomatizatsiya metalloreshushchikh stankov; obzor zarubezhnoi tekhniki, Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1956, 168 p.

(MLRA 9:11)

(Automatic control)

(Machine tools)

KAUFMAN, Lazar' Moyseyevich; DRUZHINSKIY, I.A., kand.tekhn.nauk,  
retsenzent; SMIRNOV, D.V.; ~~Inst., red.~~; MODEL', B.I., tekhn.red.

[Systems of the automatization of machine tools without copying  
devices] Beskopirnye sistemy avtomatizatsii stankov. Moskva,  
Gos.nauchno-tekhn.isd-vo mashinostroit.lit-ry, 1959. 285 p.  
(MIRA 12:9)

(Machine tools--Numerical control)

PHASE I BOOK EXPLOITATION

SOV/5846

Druzhinskiy, Isaak Abramovich, Candidate of Technical Sciences, Stalin Prize Winner.

Metody obrabotki slozhnykh poverkhnostey na metallorezhushchikh stankakh (Methods of Working Complex Surfaces on Metal-Cutting Machine Tools) 2d ed., rev. and enl. Moscow, Mashgiz, 1961. 485 p. 10,000 copies printed.

Reviewer: S. M. Levin, Engineer; Ed. of Publishing House: M. A. Chfas; Tech. Ed.: L. V. Shchetinina; Managing Ed. for Literature on Machine-Building Technology (Leningrad Department, Mashgiz): Ye. P. Naumov, Engineer.

PURPOSE: This book is intended for designers and process engineers in machinery plants; it may also be useful to senior students and aspirants specializing in machine-tool and general machine construction.

COVERAGE: Problems related to the machining of intricate-shape surfaces are discussed. Considerable attention is given to analysis and to the kinematics of working complex surfaces and the designing of special equipment for this purpose. The machining of such surfaces on copying, multiple-tracer, and

Card 1/6

Methods of Working Complex Surfaces (Cont.)

SOV/5846

mechanically controlled machine tools is also discussed. The following designers are mentioned as having contributed to the development of principles and to the construction of copying machine tools: T. N. Sokolov, Doctor of Technical Sciences; B. L. Korobochkin, Candidate of Technical Sciences; G. A. Monakhov; V. A. Leshchenko; P. S. Arzamastsev; A. M. Razygrayev, Engineer; I. A. Sukhov; A. G. Nazarov; I. A. Obukhov; I. I. Knyazhitskiy; L. S. Bron; M. A. Plis'mennyy; and Ya. P. Mezivetskiy. There are 15 references, all Soviet.

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| 4. Blades, impellers, and vanes of [turbo] engines                                  | 45 |
| 5. Panels and plates                                                                | 57 |
| 6. Cams and camoids                                                                 | 67 |
| 7. Shaped parts for various purposes                                                | 79 |
| 8. Special machining methods                                                        | 85 |

Card 2/6

LIVSHITS, B.I., kand. tekhn. nauk; DRUZHINSKIY, I.A., kand. tekhn. nauk, retsenzent; VAKSER, D.B., kand. tekhn. nauk, red.; CHFAS, M.A., red. i sd-v; PETERSON, M.M., tekhn. red.; BARDINA, A.A., tekhn. red.

[Technological processes of the manufacture and assembly of cam mechanisms] Tekhnologiya izgotovleniya i sborki kulachkovykh mekhanizmov. Moskva, Mashgiz, 1963. 169 p. (MIRA 16:10)

(Cams) (Metal cutting)

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ACC NR: AM6004817

Monograph

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Druzhinskiy, I. A. (Candidate of Technical Sciences; Winner of State Prize)

Methods of treating complex surfaces on machine tools (Metody obrabotki slozhnykh poverkhnostey na metallovezhushchikh stankakh) 3d ed., rev. and enl. Moscow, Izd-vo "Mashinostroyeniye", 1965. 598 p. illus., biblio. 7,300 copies printed

TOPIC TAGS: metal cutting machine tool, milling machine, turning machine, metal surface

PURPOSE AND COVERAGE: The book deals with the machining of complicated surfaces with metal cutting machines. An appreciable amount of space is allotted to analysis and kinematics of formation of complicated surfaces, and also to the design of special equipment. Attention is paid to the synthesis of formation of complicated surfaces and the analysis of motion that has to be executed in the machine tools to produce such surfaces. The possibility of finishing complicated surfaces with special profiling lathes and ordinary general purpose lathes is discussed. Profiling with mechanical control is also discussed. The book is intended for designers and technologists in machine building enterprises; it can be useful to senior students and graduate students specializing in machine building and technology of machine building.

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Ch. I. Information on parts with complicated surfaces and on methods of their machining - - 5

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Ch. IV. Indirect-action profiling systems - - 199  
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Ch. IX. Machining of curves, lines, and surfaces using profiling machines for operating with program control - - 462  
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SUB CODE: 13/ SUBM DATE: 04 Jun 65/ ORIG REF: 024/

Card 2/2 FW

ZIMIN, Georgiy Vasil'yevich, general-polkovnik aviatsii, Geroy  
Sovetskogo Soyuza; DRUZHINSKIY, M.V., red.

[Manual on applied aerodynamics for flight crews] Po-  
sobie dlia letnogo sostava po prakticheskoi aerodinamike.  
Moskva, Voenizdat, 1965. 101 p. (MIRA 18:4)

DRUZHIN, A., kand.fiz.-matem.nauk

"Parus," the spaceship of the near future. Izobr. i rats.  
no.8:33-34 Ag '62. (MIRA 15:9)

(Spaceships)

DRUZHKIN, I., kand.fiz.-mat.nauk; LITVINENKO, V., inzh.

On the periodical "Radiotekhnika" and its editors. NTO 2 no.8:55  
Ag '60. (MIRA 13:10)

1. Chlen Nauchno-tekhnicheskogo obshchestva radiotekhniki i  
elektrosvyazi im. A.S.Popova (for Drushkin).  
(Radio)

DRUZHKIN, L., inzhener-podpolkovnik, kand. fiziko-matem. nauk

A useful book. Tekh. i vooruzh. no.1:93 Ja '64. (MIRA 17:6)

DRUZHKIN, L.A.

Name: DRUZHKIN, L. A.

JPRS/DC-240

CSO DC-1240

Dissertation: Parametric methods in electro dynamics and their application  
to the solution of problems in electronics

Degree: Doc Phys-Math Sci

*Defended at*  
~~Affiliation~~: Moscow Engineering Physics Inst

*Publication*  
Defense Date, Place: 1956, Moscow

Source: Knizhnaya Letopis', No 51, 1956

DRUZHKIN, L.A.

Parametric techniques in electrodynamics. Sbor. trud. NTORLE  
no.2:256-275 '58. (MIRA 16:6)

(Electrodynamics)  
(Electric charge and distribution)

DRUZHKIN, L.A.

Choice of the form of a parametric vector equation in the solution of problems concerning electric charge distribution on cylindrical closed conductors of infinite length and on linear plane closed conductors. Sbor. trud. NTORIE no.2: 275-286 '58. (MIRA 16:6)

(Electric charge and distribution)  
(Radio lines)



4-58-6-7/37

AUTHOR: Druzhkin, L., Candidate of Physical and Mathematical Sciences  
and Sorin, Ya., Engineer

TITLE: A Cosmic Retranslator - A Voyage into the Future (Kosmicheskiy  
retranslyator - puteshestviye v budushcheye)

PERIODICAL: Znaniye - sila, 1958, Nr 6, pp 5-6 (USSR)

ABSTRACT: On 17 January 1958, during a session of the Sektsiya tele-  
videniya nauchno-tekhnicheskogo obshchestva radiotekhniki i  
elektrosvyazi imeni A.S. Popova (Television Section of the  
Scientific Technical Society of Radio Engineering and Electric  
Communication imeni A.S. Popov), Professor S.I. Katayev, Doctor  
of Technical Sciences, delivered a report on the utilization  
of the Sputnik for television purposes. By 1953, Professor  
S.I. Katayev had proposed using the moon as a passive re-  
flector for teletransmissions from Earth. Now Professor  
Katayev suggests the construction of a special television  
Sputnik equipped with a retransmission apparatus powered by  
a solar battery. The television Sputnik is supposed to trans-  
mit the Moscow television program to the population of Asia,  
Africa, Europe and Australia. The television section approves  
of the idea of constructing a television Sputnik equipped with  
a retransmission station, and considers it necessary to start

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A Cosmic Retranslator - A Voyage into the Future

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studying theoretical and practical questions connected with  
the launching of such a Sputnik.  
There is 1 sketch.

1. Moon--Television reflection
2. Moon--Reflective effects
3. Television equipment--Satellite mounted--Theory
4. Satellite vehicles--Applications--Theory
5. Television relay systems--Theory

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108-13-3-1/13

AUTHOR: Druzhkin, L. A.

TITLE: The Distribution of the Electric Charge in Linear, Plane, Closed Conductors (Raspredeleniye elektricheskogo zaryada na lineynykh, ploskikh, zamknytykh provodnikakh)

PERIODICAL: Radiotekhnika, 1958, Vol. 13, Nr 3, pp. 3 - 7 (USSR)

ABSTRACT: The author investigates the problem of the distribution of the electric charge in linear conductors by means of a special introduced function  $\lambda$ , as well as of the parameter  $\varphi$ .  $\lambda$  is the function of the distribution of electric charge (linear density) and is equal to  $de/dl$ , where  $e$  denotes the charge and  $l$  denotes the length of the conductor. The criterion for checking the right selection of the form of vector-parametric equations of curves the form of which have the axial lines of linear conductors. It is shown that the solution of this problem on the distribution of charge in linear conductors not only offers the possibility of finding their potentials and their fields but also leads to an essential simplification of analysis. Finally it is said that the most

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The Distribution of the Electric Charge in Linear, Plane, Closed Conductors

simple form of the vector-parametric equation of that curve the form of which has the axial line of the investigated conductor, usually leads to the solution of the problem formed. There are 2 figures and 1 reference, 1 of which is Soviet.

SUBMITTED: December 17, 1957

ASSOCIATION — DEYSTVITEL'NYY CHLEN NAUCHNO-TEKHNICHESKOGO OBSHCHESTVA RADIOOTEKHNIKA I  
ELEKTROSVYAZI im. A. S. POPOVA.

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